depend upon some influences exerted on the epiphysial cartilages by the disease. The lengthening is due to the prolonged hyperæmia attendant upon necrosis extending to the epiphysial cartilage, and giving an impetus to the cell formation there; and it is most frequent in the tibia, because the necrosis in that bone frequently affects the shaft; whereas in other bones the disease, in consequence of its being nearer to epiphysial cartilage, is more likely to cause destruction of the cartilage and consequent arrest of growth. Examples are quoted in which disease of the epiphyses, occurring in affections of joints, was attended with elongation of the bones, but that is rare in comparison with shortening from this cause. He alludes to the possibility of necrosis causing impairment and destruction of the nearest epiphysial cartilage and arrest of growth at that, the proximal, end, and merely inducing hyperæmia and increase of growth at the other and more distal end. Thus there would be diminution and increase of growth in the same bone, and produced by the same disease, affecting the two ends in an unequal degree.

The lengthening of the adjacent bones, which, though rare, may be associated either with lengthening or shortening of the diseased bone, is in either case to be attributed to the accession of blood-supply to the limb, which is in some way brought about by the disease, and like the similar change in diseased bone, it must be limited to the growing period of life.

The associated shortening of the adjacent bones may be attributed, as indeed may sometimes in part be that of the diseased bone, to inactivity of the limb. It is most frequently observed when the disease is in the proximity of a joint, the use of the limb being in such cases interfered with most.

The associated elongation of the adjacent bone, as in the case of the fibula when the tibia is elongated, may depend upon the accession of blood extending to the fibula, or, upon tension exerted upon it by the growing tibia, or by both causes. The resistance of the fibula may, however, limit the elongation of the tibia, or may cause it to assume a curve, as has been observed by Paget and Stanley. In some instances, however, the fibula has not been thus elongated, but has undergone luxation from the upper part of the tibia, its lower end remaining fixed to the tibia, and the upper end being drawn away from it. Two cases of shortening of the tibia were observed by Humphry, in one of which the upper end of the fibula was luxated, and projected above its articular surface in the tibia, and in the other the lower end projected downwards and touched the ground. Other deformities resulting from the unequal length of the two bones of one segment of the limb are mentioned.—*London Med. Record*, July 15, 1879.

Reproduction of the Tibia after Osteomyelitis.

At a recent meeting of the Geselschaft der Aerzte in Vienna (*Allg. Wien. Med. Zeit.*, No. 24, 1879), Professor WEINLECHNER presented a lad, aged 17, who in October last had been taken ill with a severe inflammation of the left leg, from the knee downwards. When admitted into the hospital he was in a very precarious condition, a complication with pneumonia had set in, the temperature was permanently high, and he was much reduced in strength by the constant suppuration. When the patient had recovered from the pneumonia, Weinlechner proposed amputation of the leg, as osteomyelitis had manifestly set in; however, as this was objected to, Weinlechner removed the whole diaphysis of the tibia, which had in the mean time become necrotic. The extremity did not present a very sightly appearance after this operation, as the soft parts of the leg hung loosely about the remaining bone. The suppuration, however, decreased rapidly, and three weeks later the whole empty space was filled by osseous neoformation, which had developed within that short time. Five months have elapsed since, during which time the wound had been healing. It is now completely cicatrized, with the exception of two very small fistulas. The newly-formed tibia is about three centimetres wide in its lower part, it is slightly abducted and not yet quite consolidated, as there is a pseudarthrosis about nine centimetres above the internal malleolus. The knee-joint is movable, and the leg can be stretched out and bent without any difficulty, but suppuration has evidently taken place in the ankle-joint, as the leg is stiff and immovable in that region.—*Lond. Med. Record*, Aug. 15, 1879.

Fracture of the Coracoid Process.

Dr. Edward C. Huse, of Rockford, Ill., records (*Chicago Med. Journal*, August, 1879) the case of a physician who consulted him on account of an injury to his shoulder which he had sustained an hour before. Upon getting out of bed he stumbled and fell, striking his shoulder against the edge of a door standing ajar. The pain was so excessive as to render him unconscious for some little time. Upon careful examination of the parts, Dr. Huse was unable to detect any evidence of injury to the bony parts. There was inability to place the hand upon the head, and extreme tenderness on pressure over a limited space just inside the acromial end of the clavicle and just below it. No crepitus or deformity was at this time observable. Next morning there was circumscribed tumescence, with considerable impairment of function, corresponding to the action of the pectoralis minor and coraco-brachial muscles. It will be remembered that the former is inserted into this process, and also that the conjoined tendon of the latter and of the short head of the biceps arise from its outer border. Crepitation was now quite perceptible. This was doubtless more from rupture of the trapezoid ligament than the separation of the fragments of bone. Indeed, when the relations of this ligament and also of the conoid are considered, it seems that this fracture implies the *necessary* rupture of both of them.

When we observe that the coracoid process is epiphyseal, and that complete osseous union does not occur till the twenty-fifth year or even later, this case may be viewed more as a separation than a fracture, perhaps. Hamilton, however, considers such separations under the nomenclature of fractures.

The exceeding infrequency of this injury is obvious from a consideration of the anatomical reasons. Nothing but direct violence of a special kind can cause it. Erichsen says only about a dozen cases of fractured coracoid are recorded. Mr. Lizars denies having seen a well authenticated case. Bransby Cooper and Dr. R. Mussey have each seen one. Hamilton has seen but one.

The patient has but little inconvenience at present, no treatment further than elevation of the forearm upon the chest having been employed.

OPHTHALMOLOGY AND OTOLOGY.

Ophthalmic Migraine.

Dr. Galezowski contributed to the June number of the *Archives Générales de Médecine* a paper on ophthalmic migraine, or, to use his own definition, "migraine which localizes itself in the organ of sight." Many authors—English, French, and Italian—have mentioned the occurrence of ocular phenomena as occasional accompaniments of ordinary migraine, but Dr. Galezowski considers that in a certain number of cases these ocular phenomena constitute the whole